
Social Equity: A Route to Progressive Taxation of Individuals

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Abstract:

Most countries of the world use a progressive scale to tax individuals. However, the level of tax progression decreased a lot thanks to a lower number of rates and their fall in the first two decades of the XXI-st century as liberal ideas had spread in the middle of the XX-th century.

Individuals' income can be taxed either at a progressive or a flat scale of rates. At the same time, there is no straightforward position, which scale to choose in the economic theory. Tying the personal income tax rate not to the absolute figures of income, but to such categories as a household's subsistence level, a budget of a household in comfortable circumstances would be reasonable in conditions of a dynamic Russian market environment burdened with inflationary phenomena.

This model of the personal income tax and the use of a progressive scale in a city with population numbers of up to 20 million people shows that the tax will rise by a mere US \$4.7 compared with the current 13% for low wage workers under the recommended model, while the income tax for medium paid workers will rise by US\$ 57.8. At the same time the figure rose by US\$ 372.9 for highly paid employees.

The use of this model ensures a significant increase of budget income of a region and closure of the gap between wages of highly and low paid workers employed in the economy.

Keywords: Taxation, individuals, social equality, progressive taxation rates, state budget, tax, economy.

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1. Introduction

A socially responsible system of personal income tax will ensure lower compulsory deductions to the government's social extra-budgetary funds and consequently a lower volume of social services offered by the government. At the same time as a taxpayer, a household will be able to manage its income freer than before, while the head of the household will get an incentive to grow professionally and make his entrepreneurial activities more active.

The personal income tax or its deductions are not only one of the key sources of municipal budgets in the developed countries of the world, according to McKean (1950), but also an efficient social regulator. The personal income tax contributes up to 10% to the overall structure of the Russian Federation's federal budget (Keynes, 1937). At the same time, taxation of individuals' incomes has significant theoretical and technical drawbacks:

1. Introduction of a proportional income tax in a period of their significant differentiation contradicts the theory and practice of modern taxation. Thus, the specificity of this tax as a tax on individual's income is lost.
2. Setting a limit on an income for standard deductions is faulty because they represent an element of taxation, which is essential and common for all payers who are equal before the law.
3. At the same time a higher rate of social tax deductions (for Russia in the form of payment for education and medical services in the amount of up to 120,000 rubles) without considering a social status of a tax payer (the income level, the number of children and dependents in the family, etc) is not quite right. The modern system of educational, medical and housing deductions, which are not capped by the level of a taxpayer's income, has essentially turned them into a mechanism of large tax exemptions for the rich.

We should note that the problem of high or low rates of the income tax is fairer than the current system. At the same time, most discussions contain comments about vertical equality in taxation because of a large scope of opinion. At the end of the day the choice in favor of a proportional or a progressive income tax from the position of social justice depends on what kind of inequality in income distribution is allowed in the society and which level of income redistribution it believes fair.

2. Concept Headings

One should note that Russia's current flat personal income tax scale did not result in a significant increase of budget income and likewise capital did not emerge from shadows and return to the territory of the Russian Federation. We should note special principles of personal income taxation, which are common for everyone:

- Generality of taxes and equality in taxation, fairness (Smith, 1904). Each person must pay the taxes and duties, which are introduced taking into consideration the real ability of a taxpayer to pay the tax. Taxes and duties cannot be discriminatory;
- Prohibition on setting the taxes and duties, which violate a unified economic environment, a free movement of goods (work, services), money, etc. within a jurisdiction;
- Clearness and comprehensibility of taxes and duties for the taxpayer. All inherent doubt, contradictions, unclearness of legislative acts on taxation and duties are interpreted in favor of the tax payer;
- The use of rules and norms of international treaties in the taxation area, if their rules and norms differ from those provided in the Russian Federation Tax Code and federal laws.

The principle of fairness with specification of vertical and horizontal taxation principles is based on an economic theory of supply by A. Laffer. Fairness in a vertical principle means that a tax must be levied in strict adherence to financial standing of a person. This means that the tax rate must be increased along with increasing income. In its turn, the horizontal principle ensures a flat taxation rate for people with the same income. Basing on the current possibilities of the state when all the rate types are combined optimally, the following choice is possible:

- equal rates – different categories of taxpayers with different sizes of income have the same size of tax deductions. A method of poll (lump sum) taxation, historically the earliest and the most efficient method, which distorts nothing, but which is not used now because it contradicts the principles of justice, corresponds to the equal rates;
- proportionate rates – corresponds to the method of proportional taxation. Flat percentage rates regardless of the size of the taxation base are used. The share of the tax (the tax burden) in the cost or other estimate of the taxation base (taxable income, added value, property value, etc.) does not change. At that the sum of the tax grows proportionally to the growth of the taxation base;
- progressive rates – a method of progressive rates is used. The tax rates grow along with growth of the taxation base. The share of the tax (tax burden) in the cost or other estimate of the taxation base increases. At that, the tax grows progressively in relation to the growth of the taxation base;
- regressive rates – is a method of regressive taxation. Here falling tax rates are used when the taxation base widens. The share of the tax (the tax burden) falls in the cost or other estimate of the taxation base as the taxation base grows. At that, the volume of the tax may grow while the taxation base grows.

According to Mirrlees (1971) a lump sum method leaves the volume of the tax flat, while the taxation base increases. All the other taxation methods call for a higher tax in absolute figures, when the taxation base increases, but it is the figures of the shares that behave differently. The marginal rates, according to Mott and Slattery (1994) are set directly in a normative act related to the tax.

In the progressive taxation method an average rate increases along with the increase of the taxation base, in regressive taxation, on the contrary, it decreases (Keynes, 1919). At that, in proportional, regressive and progressive taxation with a simple relative or complex progression (regression) the highest tax rates coincide with the marginal rates for the category. In this case the marginal tax rates, according to Raven (2017), represent total highest rates. In proportional taxation, the highest rate coincides with the only marginal rate. We should note that the use of the notion of the marginal tax rate in simple bracket progression is unreasonable, because the rate will equal zero within the same bracket (Knight, 1921; Skidmore, 1999; Medvedeva *et al.*, 2016; Musaeva *et al.*, 2017).

Besides, the volume of tax deduction is often computed from the factual income of a taxpayer, not from the taxation base to characterize this or that method. Effective rates, according to Walker (2003), allow us to uncover a hidden regression (progression) unlike its explicit forms, which we will consider below (Daneshkhan, 2004). For example, the real progressivity of a proportional tax for individuals with small incomes and the real regressivity of proportional taxes for the wealthy strata of the population.

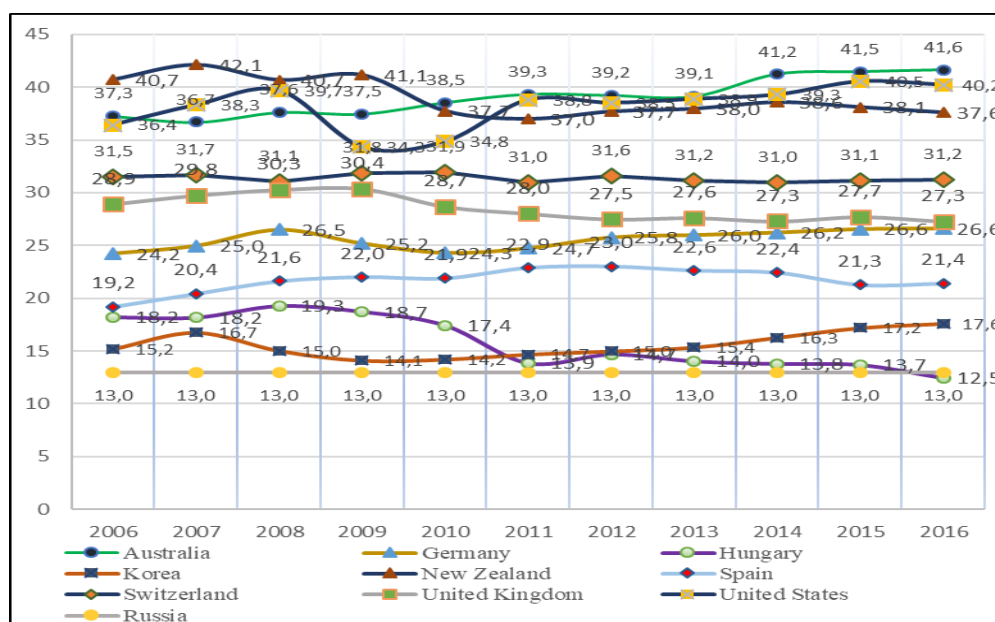
Personal income taxation can be done according to a progressive or to a regressive scale of rates. At the same time, economic theory contains no unified position on the choice of this or that scale. According to White (1951) and Cliffe (1888) the choice depends on which taxation qualities the society prefers – neutrality or fairness and equality. Liberal economists, who appreciate neutrality of taxation most, are proponents of proportionate rates. However, ideologists of social fairness, according to Worswick (1977) who stress the priority principle of personal income taxation, like the possibility of introduction of progressive rates, because the redistribution possibilities of the income tax and its progressivity are linked functionally. The higher the progressive level of the tax, according to White (1951) the larger are the possibilities for redistribution of earned income. Apart from social advantages, the choice of the taxation scale in modern conditions is done under the key influence of international competition for mobile production factors – for labor and capital. Most countries use a progressive taxation scale in personal income taxation (Arnold 2001).

At the same time the scale of taxation progression fell significantly in the wake of a reduction in the number of rates and their contraction at the start of the XXI-st century under the influence of liberal ideas, which spread in the period of 60-90s of the XX century (Figure 1).

Some countries reduced their income taxes slightly in the period of the international crisis (Finland, Switzerland, and the Czech Republic). Other countries, on the contrary, raised them (the U.S., Japan, and Mexico). Most countries did not change the key rate but adjusted other taxation elements (tax rebates and tax advantages). The personal income tax (PIT) in the Republic of Korea varies from 6 to 40% and depends on the level of earned income. At that, the lowest rate is enjoyed by an

annual income of up to 12,000,000 KRW. Besides this type of PIT, there is also a local income tax, which is levied at a rate of 10% of the PIT rates. PIT is paid to the National Tax Service (NTS). A local income tax is paid to the city or the province, which is the domicile of the taxpayer.

Figure 1. The change of key personal income tax rates in some countries of the world in the period of 2006-2016



Switzerland is conspicuous for taxing individuals' worldwide income and wealth. Non-tax-resident individuals only have their Swiss sources of income and wealth taxed. Income taxes are levied at three different levels; at the federal level (which is the same all over Switzerland), at the cantonal level (which is the same within a canton and is based on the canton's own tax law and tax rates), and at the municipal level (municipalities follow the cantonal tax law, but are entitled to set their own communal tax rate within certain parameters). The income tax rates are progressive at the federal level and in most of the cantons. Some cantons have recently introduced flat rate taxation (Aastveit, 2013). A direct federal personal income tax amounting to 0.77% is levied on income of 14,500 CHF, then from 31,600 CHF of 0.88%, from 55,200 CHF of 2.64%, etc. and over 755,200 CHF of 11.5% respectively. The differentiation of rates depends on the following factors married taxpayers and single taxpayers with minor children или single taxpayers (Carpinella, 2011).

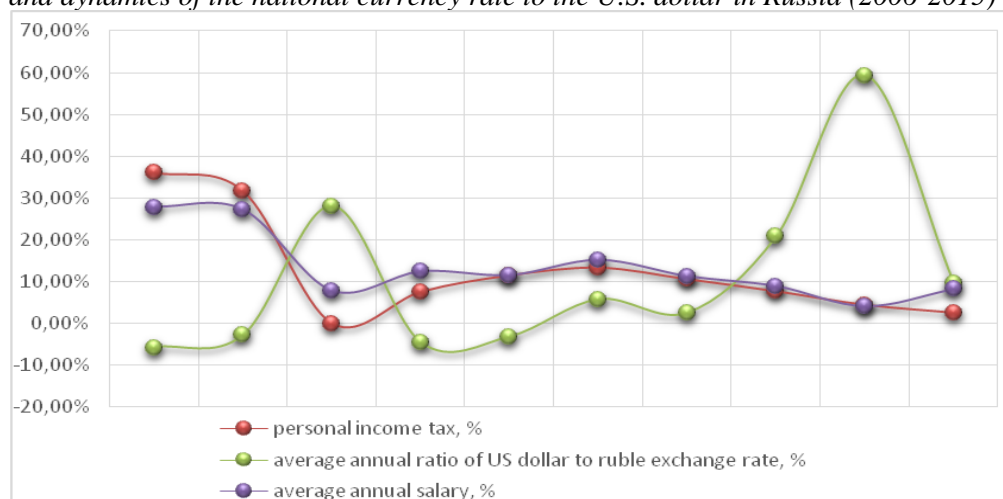
If a progressive taxation system is responsible for a households' income differentiation, which is acceptable for most of the population (it does not trigger social tensions, conflicts, mass impoverishment, ensures creation of normal

conditions for citizens' life), a transfer from progressive to proportional rates during a tax reform can be quite justified. In its turn, if the level of income differentiation in a society is unacceptable for most people and requires an adjustment, a transfer to a proportional tax during a tax reform cannot be considered grounded and reasonable. In this case, the special feature of a proportional tax is that it cannot influence the existing level of social stratification by withdrawing an equal part from incomes of different sizes. Consequently, such correlation after taxation remains the same as before taxation.

Exclusion is a situation, where under the influence of different factors (primarily a large scale of tax evasion) progressive taxation cannot ensure a fair distribution of income. In this case, the society may temporarily resort to proportionate taxation in the hope of impacting the scale of tax evasion and avoidance and raise fairness of taxation. Such a situation can be seen in most CIS countries, where, following transformation of part of the wage into an interest income, unofficial payments and the use of other ways of earned income concealment, "wealthy" social groups have a chance to slash their tax burdens significantly, which makes people with a low or medium income the key tax payers, according to Mott (1998), Haerler (1995). Therefore, progressive taxation has failed to have an adjusting influence on social stratification becoming the reason for its cancellation and introduction of a proportionate tax rate.

Another factor of similar changes in income taxation, especially important in the post-socialist countries, which aim to join the EE is international tax competition and the need to search for instruments to spur up economic growth, according to Mair (1992). Russia's taxation legislation, which is valid in 2006-2016, encompasses the use of a flat income rate in the amount of 13% for Russian Federation (Akhmadeev, 2016) residents regardless of the size of earned income (Figure 2).

Figure 2. Comparative characteristics of growth of wages, individuals' income tax and dynamics of the national currency rate to the U.S. dollar in Russia (2006-2015)



A comparative analysis of growth of an average wage and an income tax paid to the budget done for the period of 2006-2016 demonstrated a similar trend regardless of the dynamics of the national currency's rate to the U.S. dollar. At that the signs of crisis in the Russian economy in the peak periods of 2008 and 2015 had a significant influence on the general trend of a fall in an average wage – a slowdown of growth in the average wage for the researched period from 2006 to 2016 amounted to 2% annually, which in its turn had a significant impact on the decrease of tax incomes from the personal income tax to the budget – a slowdown in the growth of the tax income amounted to 2.6% annually.

In this regard, we may state that the use of a flat personal income tax in the amount of 13% regardless of the volume of earned income is not adequate to the task of ensuring the fairness principle on the one hand, and the state's fiscal interests on the other. At the same time, the inflow of funds to the budgets of all levels should take place not only thanks to the norms and rules of existing taxation legislation, but also through a stronger control over capital.

3. Materials and Methods

An average (effective) tax rate is a relation of paid tax T to the tax base X , which can be shown in the following ratio:

$$\tau_{cp} = \frac{T}{X} \quad (1)$$

At that, an average (real) tax rate is a quantity equaling to a relation between the paid sums of tax N to the taxation base B :

$$\rho_r = \frac{N}{B} \quad (2)$$

A mathematical notion of a marginal tax rate as a derivative of function $N = N(B)$ where B variable can be considered economically important. In accordance with differential analysis, it defines growth of paid sum of the tax ΔN when taxation base ΔB changes by 1% or the sum of the tax payment on each additional ruble:

$$\rho_{lim} = \lim_{\Delta B \rightarrow 1} \frac{\Delta N}{\Delta B} = \frac{dN}{dB} \quad (3)$$

But in fact, we should be guided by an effective tax rate defined as a relation of paid tax N to earned income D :

$$\rho_{ef} = \frac{N}{D} \quad (4)$$

Within the framework of proportional taxation, the marginal and average rates correspond to each other; they are constant regardless of the size the taxation base (if

we disregard the nontaxable minimal sum). For instance, the first 100 conditional units of income are exempt from the tax, while the remaining income is taxed at a proportionate rate of 13%. This rate is a marginal rate. In this case an income of up to 100 units is taxed with zero both marginal and average rates. With an income of above 100 units the marginal rate will always be the same – it will always amount to 0.13. The average rate will not be constant, it will rise.

In the dynamic market environment of Russia's current economy, which is burdened with inflationary phenomena, it would be reasonable to tie the personal income tax rates not to the absolute income figures, but to such categories as a subsistence rate of a family, a reasonable consumer budget of a household, a budget of a household in comfortable circumstances, which should be calculated on an annual basis and approved alongside the law on budget of the country for the next financial year.

Let's consider the practical use of this approach through a transfer to a progressive scale of a personal income tax on an entity – a city with a population of up to 20 million people. We can recommend the following model of a personal income tax, under which it will be used automatically as an instrument of cutting the gap between income of the richest and the poorest with minimal participation of the government according to the following relation:

$$N_f = (D_f - C_{\min}) \tau \sqrt{\frac{D_f}{T_{\min}}} \quad (5)$$

Where N_f is a personal income tax (1 – the poor, 2 – the medium, 3 – the rich);

D_f - income (wage) of an individual (1 – the poor, 2 – the medium, 3 – the rich);

C_{\min} – tax exempt social minimum (1,000 rubles)

τ - basic rate of the personal income tax (10%), deductible to the municipal budgets of the city, while the remaining part is deductible to the budget of the city (a progressive tax);

T_{\min} - minimal wage, which equals the subsistence level.

$$N_f = (D_f - C_{\min} * (G + 1)) \tau \sqrt{\frac{D_f}{T_{\min}}} \quad (6)$$

where G is the number of children.

The quantity of all the indicators measured in rubles is taken in monthly terms, or the fiscal period (depending on specifics of a business). The factual data for the use of the model of a personal income tax with a progressive scale are taken as follows:

- a) Number of workers employed in the economy 6, 243,000 people.
- b) Nominal wage (average monthly wage) U.S.\$654.3
- c) Subsistence level U.S.\$188.4

- d) Accounting payroll fund (annual) U.S.\$ 49020.4 mln
- e) Minimal wage (32% of subsistence level) U.S.60.3

Given an expert assessment based on the statistics data calculated by Rosstat for the period of 2006-2016:

- a) Low-paid employees (4 minimal wages) USD241.2 received by 10% of employees (624,300 people);
- b) Medium-paid employees USD486.3 receive 80% of workers (4,994,400 people);
- c) Highly-paid employees USD2,411.8 receive 10% of workers (624,300 people).

The factual overall payroll fund amounted to USD44020.4 bln, including low-paid workers, who accounted for USD1,806.8 bln, medium-paid workers for USD2,414.6 bln and highly-paid workers for USD18,068 bln respectively. In this case the size of the personal income tax deductible from one low-paid employee will amount to USD36.2, from medium-paid workers to USD121 and from highly-paid employees to USD686.4 respectively. If the share of the wage deductible as tax is not limited, the net wage after tax will amount to USD205.1 with low-paid workers, to USD365.3 with medium-paid workers and USD1,725.4 with highly-paid workers respectively.

4. Discussion

The model of the personal income tax with the use of a progressive scale we have suggested and discussed using a city with population of up to 20 million people as an example shows that the tax for low-paid workers under the model we have suggested rises by a mere USD4.7 compared with the current 13% rate, and by USD 57.8 for medium-paid employees. At the same time, the indicator rose by USD372.9 for highly-paid employees. At that, the gap between incomes represented by the wage between low-, medium- and highly-paid workers narrow (Table 1).

Table 1. Correlation of a gap in incomes between low-, medium- and highly-paid employees in case of use of a personal income tax with a progressive scale

Workers	Average monthly wage before tax, U.S. dollars	Average monthly wage after tax, U.S. dollars		Gaps in income represented by wage, times		
		At a rate of 13%	Under the model	Before tax	At a rate of 13%	Under the model
Low-paid	241.2	209.8	205.1	1	1	1
Medium-paid	486.3	423.1	365.3	2.02	2.02	1.78
Highly-paid	2,411.8	2,098.3	1,725.4	10.0	10.0	8.4

Note: Low-paid workers are considered a "1".

The data from Table 1 show that a flat rate on income of all workers does not change the gap between low-, medium- and highly-paid employees, while the use of the recommended model demonstrates that it works as an instrument to close the gap in incomes of all the employees.

Thus, the use of the recommended model of the personal income tax and primarily on wages of employees engaged in the economy increase the income part of the budget of a region significantly and play the role of an instrument bridging the gap between wages of highly-paid and low-paid workers employed in the economy.

We believe that the results of the experiment can be adjusted while using this model because the differentiation of workers employed in the economy into low-paid and highly-paid employees and their average monthly wages was estimated judgmentally. This case requires an additional mid-term forecast with the use of the extrapolation method considering data of the overall number of people employed in the economy, the dynamics of the payroll fund and an average monthly nominal wage.

One should take into consideration that an order, under which each company must only have a current account in the treasury system, which is under the jurisdiction of the country's law-making entities, should be confirmed by law to avoid a cumbersome and complicated system of control over collection of the tax from workers employed in the economy of the basic value (10%), according to the place of residence, and its progressive part at the location of the employing organization. This current account should handle all economic and monetary transactions (Mott and Caudle, 1995). It should also hold all the funds used to pay all wages to all the employees engaged in the economy.

While using a softer transfer to the use of the recommended model of a tax on wages of workers employed in the economy, the formula may use another power function with a lower indicator. At that, while transferring to a progressive system of personal income taxation it is necessary to consider the general order of setting a taxation system considering that the level of people's incomes is not stable (Robinson, 2006). Therefore, we should support the position of economists, who suggest setting a mechanism of adjustment of the personal income tax levels each 5 – 7 years, because the level of people's incomes grows by 20—25% on average in the period (Akhmadeev, 2016). Besides, the order of setting a step of progression or the size of schedule is key. Therefore, we should mention the opinion of a prominent Russian thinker, philosopher, sociologist and economist G.V. Plekhanov voiced in 1918 in his book "My Political Will" the following: *"Personal income taxes should be progressive, but they should not strangle the businessman"* (Osipov, 2017). Thus, the overall structure of a progressive personal income tax should be based on a combination of the three key principles:

- 1) different incomes – different approaches;

- 2) there are incomes and there are superincomes;
- 3) common difference (schedule) should be minimal.

To make the different incomes – different approaches principle work we should single out employment and nonemployment earnings (received not because of personal activities of an individual) when receiving an income, which is taxable under a progressive scale. At that dividends, interest on deposits, rental of property, revenue from the sale of a business and expensive goods, lottery prizes, inherited property, expenses not covered by income, etc are all nonemployment earnings.

Such differentiation does not mean that different incomes should be taxed at different rates (Cheltenham, 1994; Chapman, 2002; Theriou, 2015; Shmaliy and Dushakova, 2017). We are not talking about making the existing order of paying the personal income tax more complicated. To a certain extent (to the level of superincomes), some types of earned incomes should be taxed at a flat rate (excluding the sums of income received in the form of dividends, etc.).

Historically, the principle of differentiation of income taxation is known in the example of Italy of the XIXth century, where the principle of justification of income receipt by individuals was used for personal income taxation purposes. Passive income, i.e. incomes coming in regardless of a businessman's participation were taxed at the highest rate. In its turn, incomes of industrial and trade organizations received from the expenditure of labour and financial resources were taxed at a minimal rate. Other types of income received because of labour activity of the tax payer, were taxed at a highest rate.

The principle there are incomes and there are superincomes is used when a progressive taxation scale is applied only to earned superincomes, i.e. incomes, whose size cannot be related or compared to the usual incomes of individuals (Rousseau, 1945). At that, the size of the superincomes must be excessive, extraordinary, so large that they do not turn common workers, even highly-paid employees, into people with increased taxation.

The principle common difference (schedule) should be minimal. Higher personal income tax rates under the progressive system must be, first, higher than usual not by times as suggested by many proponents of progressive taxation, but by insignificant components. Secondly, higher personal income tax rates should be used to such nonemployment superincomes, in other words, such nonemployment superincomes should be taxed at the highest personal income tax rate. Thus, if a standard personal income tax amounts to 13%, a step-by-step rate may stand at 15, 17, 19, 20% with the maximum rate (for overly high incomes) of 25%.

Famous English economist John Stuart Mill, while rejecting the fairness and common sense of a progressive tax, nevertheless allowed for two exclusions. The first exclusion covered “...enhanced taxation of annuity as an income, which tends to increase all the

time without a single effort or sacrifice on the part of the owner.” The second exclusion covers the inheritance tax, which, according to beliefs of the scientist, should be progressive. In other words, the approaches to organization of progressive taxation suggested by the authors have a historical background. Consequently, we can achieve the key goals of social fairness of the tax if we create a progressive personal income taxation system basing on the three principles.

5. Conclusion

With the aim of stimulating the fiscal importance of the tax and the fulfillment of social principle of taxation, several principal changes in the personal income taxation system should be introduced:

- a) It would be reasonable to cancel all forms of direct taxation of incomes, which do not exceed the subsistence level of workers (income and social taxes, other deductions). It is obvious that workers with such incomes cannot and should not participate in financing of state expenses and in the accumulation of resources for their pension provision. Deducting money from such people is useless, because it immediately goes into the social subsidies system of the state.
- b) As the economy stabilizes and sustainable economic growth starts, it should be reasonable to restart the use of a progressive system of rates while collecting the personal income tax with a simultaneous decrease of an overall taxation burden on the payroll fund by cutting the overall deductions to social insurance funds.
- c) Differentiation of the size of the social, property and professional tax deductions depending on the level of income, which the taxpayer receives, should be introduced.
- d) In our view, the need to change the very tax unit is of principal importance in the creation of a system of socially focused personal income taxation. Income taxation should be used not for the income of an individual, but the income of a family, because this will allow the government to protect financial aid to the family, stimulate its growth through taxation. (Such taxation practice exists in France, Germany, Great Britain and many other European countries, in the U.S., Canada).
- e) To do this, it would be reasonable to tie the personal income tax rates not to the absolute income figures, but to such categories as a subsistence level of a family, a rational consumer budget of a family, a budget of a household in comfortable circumstances, which should be calculated on an annual basis and approved alongside the approval of a budget law for the next year in conditions of a dynamic market environment of Russia’s modern economy.

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